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Map of KOREA

1945

KOREA'S TURTLESHIP

The World's First Iron Clad Dreadnaught

KOREAN AFFAIRS INSTITUTE, INC.

1029 VERMONT AVE. N.W. WASHINGTON 5, D.C.

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KOREA'S TURTLE SHIP

THE story of Korea's Turtle Ship, its inventor, Admiral Yi Sun Sin, and of the era in which it was developed, is one of the most amazing chapters in the history of the country.

The sixteenth century found Korea a prosperous, happy and peacefully contented nation, with her armored defenses neglected—just as they were in the country before Pearl Harbor.

Korea dreamed peacefully, unaware of the idea festering in the mind of one Hideyoshi, their neighbor across only one hundred twenty-five miles of water—Hideyoshi, the Japanese Shogun who was planning to become the conqueror of the world.

By 1586 Hideyoshi had made his plans, which included the use of Korea as the first unaided foothold and a stepping stone into China for further conquest.

He sent an embassy to Korea demanding tribute to Japan. The Korean Court, unused to the demands of the "dwarf barbarians" as they called the Japanese, and annoyed at the latchet messenger, refused to even reply.

World's First Armored Dreadnaught

By the time Hideyoshi turned his thrusts against Korea, Yi Sun Sin realized that there were three hazards a Navy man had to contend with—fire arrows setting his vessels afloat, ramming by enemy ships and the possibility of the enemy grappling and boarding the defending vessels. He determined to develop his own idea of a ship to combat these hazards and emerged with the Turtle Ship, the world's first armored dreadnaught.

Stories of the Turtle Ship and its marvelous powers vary with the historians who record them.

From Homer B. Underwood, Homer B. Hulbert and Vice Admiral G. A. Ballard of the British Navy, all considered fairly accurate historians, come conservative descriptions. From them one gets the following picture:

The Turtle Ship was approximately 120 feet long (twice the length of the largest Japanese vessels), 50 feet wide, propelled by 28 oars and carried an auxiliary sail which was lowered during combat. Covered on the top and sides with iron plates, it was studded with spikes to keep the enemy from boarding the vessel. A fierce-looking iron prow was for ramming purposes, and through the turtle's open mouth warriors shot cannon at the enemy. A similar opening in the rear and numerous portholes on the sides were also used for shooting fire arrows, cannons and throwing crude bombs and grenades. When ruling into action, sulphur and salt peter were burned in the hold, which belched smoke and flame, giving the ship the appearance of a monster and forming a smoke screen for the fleet.

Hideyoshi Strikes

By early 1592, Admiral Yi was well prepared for eventualities with a number of the Turtle Ships and was stationed on the west coast of Korea, while another Admiral was detailed to guard the southern port of Pusan.

On May 24, 1592, while diplomatic negotiations were still going on at the Court of Korea with the Japanese envoys, Hideyoshi landed a force of 158,000 men from 5,000 ships at the port of Pusan. The Admiral in charge of defense there was so demoralized by the suddenness of the attack that he offered but little resistance and the invaders swept on through the heart of Korea like a swarm of locusts.

The Admiral at Pusan sent a call for help to Admiral Yi, who rushed to second invitation, and while the invaders were devastating the land, he sailed around to annihilate their navy, with a thoroughness and dispatch fully describes in these two-sentence notes by British historian Admiral G. A. Ballard in his "The Influence of the Sea on the Political History of Japan."

"It is always difficult for Englishmen to admit that Nelson ever had an equal in his profession," Ballard writes, "but if any man is entitled to be so regarded, it should surely be the great naval commander of Asiatic race who never knew defeat and died in the presence of the enemy of whose victories a track-chart might be compiled from the wrecks of thousands of Japanese ships lying with their valiant crews at the bottom of the sea, off the coasts of the Korean peninsula . . . Yi-sun not only possessed the better ship, but he made the very best use of her qualities; and it seems, in truth, no exaggeration to assert that, from first to last, he never made a mistake, for his work was so complete under such a variety of circumstances as to defy criticism. Although his whole record of service is well known, there is not a single point of importance in which his judgment can ever be held to have been at fault." That from a conservative Britisher!

Japanese Fleet Annihilated

At one time, Admiral Yi, by sailing furiously into the enemy with his Turtle Ships, smashed the Japanese fleet and, as quote Ballard again, ". . . in the short space of six weeks . . . achieved a series of successes unsurpassed in the whole annals of maritime war, destroying the enemy's battle-fleets, cutting his lines of communication, sweeping up his convoys, imperiling the situation of his victorious armies in the field, and bringing his most ambitious schemes to utter ruin."

Not content with that, Yi lay in wait for the convoys of reinforcements and supplies and destroyed them.

Late in 1596 Hideyoshi again dispatched an invasion force of 100,000 men. As soon Admiral Yi sallied out with renewed vigor to cut up the enemy fleet.

The time Hideyoshi must have realized he was beaten and that his dreams of world conquest had been wrecked on the shores of Korea by Admiral Yi. Though he refused to admit defeat, one prospect might have been what hastened his death that year.

Early in 1597, Konishi, chief of the invasion forces, scrounging to save what was left of his army, ordered his men to embark for home. This was what Yi had been waiting for—a fleet of Japanese ships, already defeated and dejected, packed with enemy ships.

Again Ballard's is the most vivid description of the resultant action:

"The great battle that followed was the Korean Trafalgar, for . . . it ended the battle-fleet actions of Japan for 300 years, but as the case of the life of the greatest seaman against whom they ever fought. . . . When for the last time the Korean Admiral sighted an enemy's fleet ahead he had only a very few more hours to live, but for that fleeting space he enjoyed at least the supreme satisfaction of seeing the last of the invaders leave his native land and the knowledge that no man had been more instrumental than himself in bringing that end to pass . . . In the bright of the action Yi-sun was killed; a fitting end to such a career."

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SHEET 2

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LEGEND

- Large Cities
- Cities
- Small Cities
- Towns
- Main Roads
- Secondary Roads
- Railroads
- Ferry Lines
- Single Lines
- Narrow Gauge

Miles

Kilometers

Polyconic Projection

SHEET 3

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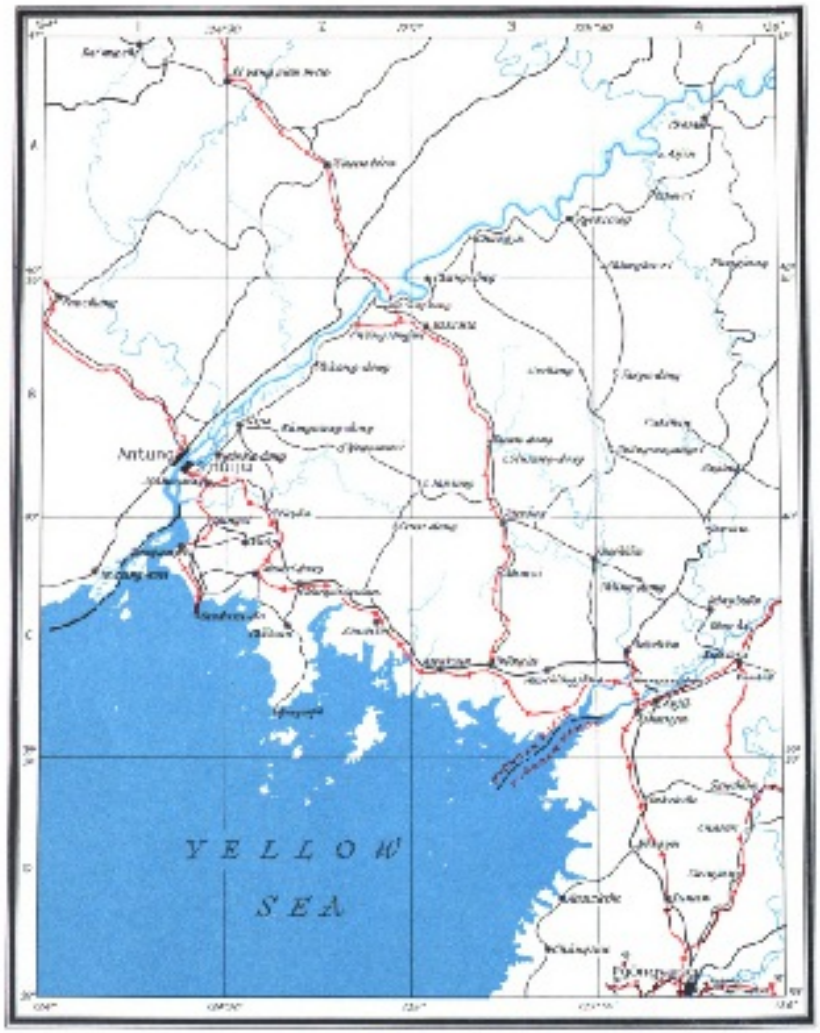

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LEGEND

SHEET 4

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LEGEND

- Large Cities
- Cities
- Small Cities
- Towns
- Main Roads
- Secondary Roads
- Elevations
- Double Track
- Single Track
- Railroad Station

Scale 1:1,000,000

0 10 20 30 40 Miles

0 10 20 30 40 50 60 70 Kilometers

Regional Projection

SHEET 7

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SHEET 8

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LEGEND

SHEET 9

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NOTICE—In consideration of international navigation charts, our map makers retained the Japanized names of KOKUZAN ARCHIPELAGO, MAIKOTSU CHANNEL and SAISHU STRAIT on sheet No. 12 of the main map. But Koreans will make upon using its own names for those places because they are Korean possessions and waters. Therefore, the Institute, in future issues of the Korean Map, will replace KOKUZAN with HUKSAN, MAIKOTSU with MAENGL, and SAISHU with CHOEJU.

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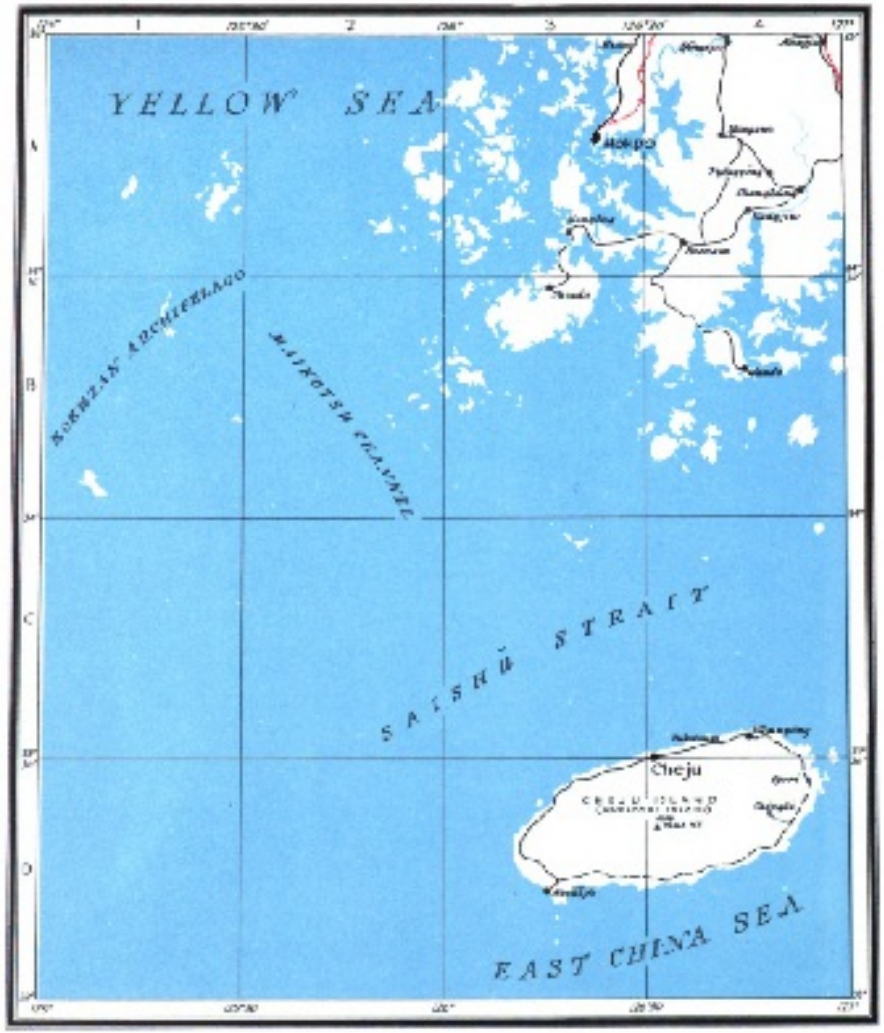

LEGEND

- Large Cities
- Cities
- Small Cities
- Towns
- Main Roads
- Secondary Roads
- Elevations
- Double Track
- Single Track
- National Boundary

SCALE 1:2,000,000

Mercator Projection

SHEET 17

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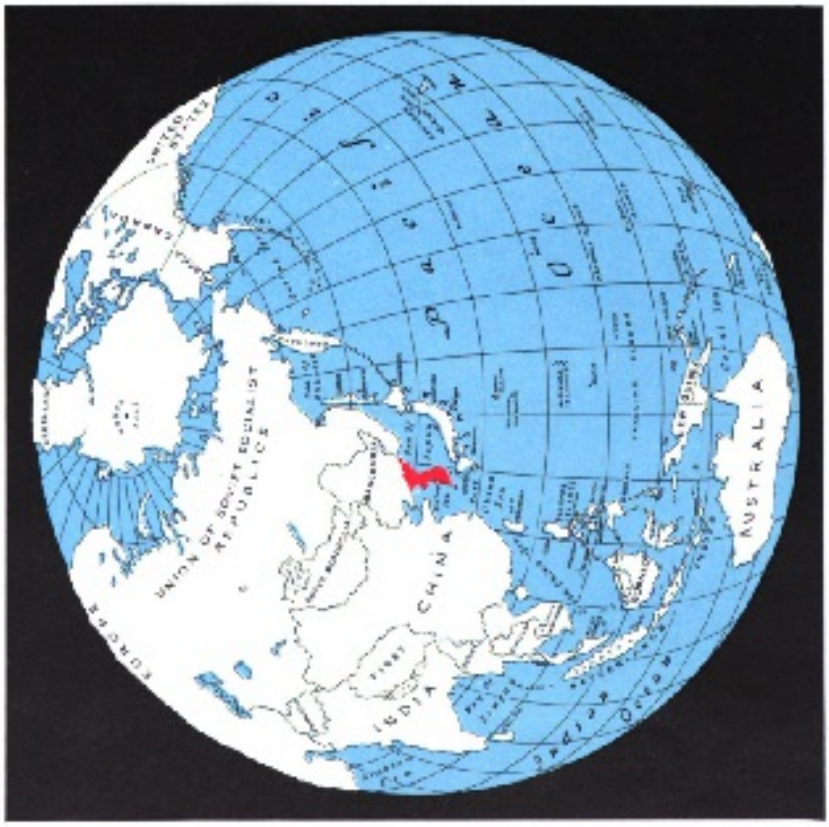

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EXPLANATION OF INDEX

Korean names are used throughout on the accompanying maps. However, in the case of some few large towns, the Japanese names may be found in brackets following or under the correct Korean names. All names in the index is followed by the word "See" are the Japanese equivalent of Korean names or alternate names for the town or physical feature.

The Grid location will be found following each name as "Chemulpo, 9 D 1" in which case turn to Sheet 9 and find the Grid letters and numbers in the map margins, then locate the correct square, D-1, in which the town may be found. In all cases the Grid numbers refer to the town spelt and not the name listed which, for technical reasons, may have to be put in another square.

If a name is written "Chunchon, 5 D-3 (See P-10)" the name will be found as above and in addition on Grid P-10 of the General map of sheet two.

The McCune-Reischauer System for the romanization of Korean names has been employed. This system has been adopted for official use by the Board of Geographic Names, Department of the Interior, and is used on all maps published by the Army Map Service.

GUIDE TO PRONUNCIATION

Vowels:

a as *a* in *father*	*ae* as the *a* in *cat*
e as *e* in *weigh*	*i* as the *e* in *see*
o as *o* in *note*	*u* as the *u* in *put*
u as *u* in *June*	*ö* as the German *ö* (may be pronounced as *ue* in *wet*)
ŭ as *o* in *color*	

Consonants:

All consonants are pronounced as in English except *r* which is "light", i.e. a sort of combined *l* and *r*. *ch* is similar to the Japanese *ts*. The aspirate mark (*h*') indicates a strong explosion of the consonant, as in *k'ŭmgo*. The unaspirated plosives (*k,p,t,ch*) are pronounced with virtually no explosion.

The sign *n'* denotes that both consonants are sounded. When no mark is used the sound is ng, examples: finger and single.

NAME	INDEX	GRID REF.
Anch'ang	1	C-2
Ando	4	A-6
Ap'ogubyŏnsan	4	A-6
Arahto (See Ahjŏ)		
Arita (See Sam'ri)		
Arupo (See Ardoko)		
Asŏl	2	A-3
Asŏpsŏ	3	B-4
Asŏsa	1	A-1 (See C-6)
Atsuka (See Asŏl)		
Ayanggol	11	C-2
Azai (See Asŏ)		
Azŏ (See Asŏ)		
Ch'ŏ	1	C-1 (See D-2)
Ch'ŏ'ŏ (See Ch'ŏngch'ŏ)		
Ch'ŏ Tŏkch'ŏ	12	D-1
ch'ŏngbŏmsŏ		(See C-6)
Ch'ŏnggye	12	D-3
Ch'ŏngch'ŏ (See Ch'ŏ)		
Ch'ŏngdo	8	D-3
Ch'ŏngdŏ (See Ch'ŏngdo)	

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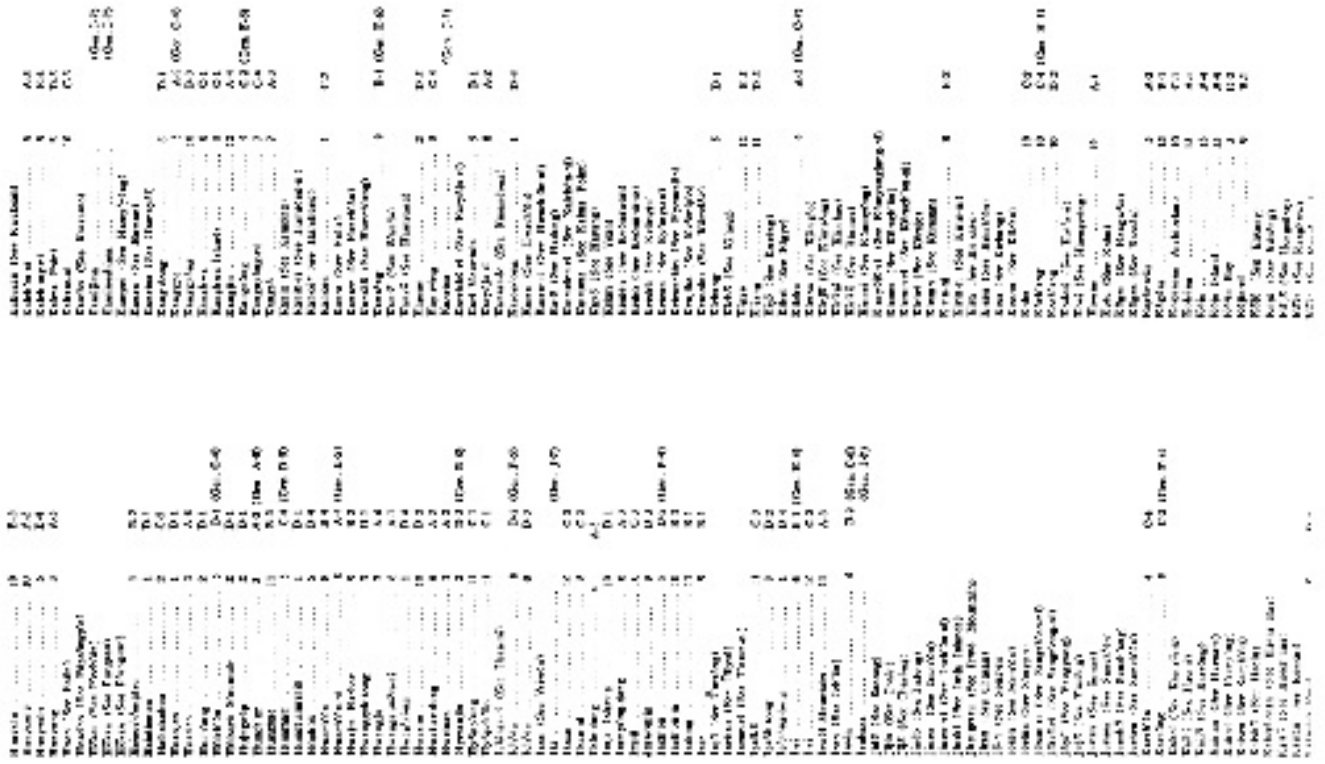

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KOREAN MINERAL STATISTICS

GOLD

Summary: In 1936 there were 4,159 mines in operation, including 342 alluvial deposits; total production was 362,000 oz., valued at $30,300,000.

In 1940 there were 5,859 mines in operation including 475 alluvial deposits; total production is estimated to have been about 1,100,000 oz. valued at about $40,000,000.

Leading Mines in 1935 with estimated 1940 production value

Mine	Province	1940 est. value of production
1. Unsan (Unsan)	Pyŏngan-pukto	$3,000,000
2. Tŭpo-ŭng (Tŭpodal)	Pyŏngan-pukto	2,500,000
3. Ongjin (Ongjin)	Hwanghae-do	1,800,000
4. Kŭmp'ung (Kŭmsŏng)	Kyŏngsang-pukto	800,000
5. Kwangyang (Kŭmsŏng)	Chŏlla-namdo	800,000
6. Sŏnt (Sŏnt)	Hamgyŏng-do	700,000
7. Sŏngbŏng (Ŭiju)	Pyŏngan-namdo	600,000
8. Kŭmp'o (Kŭmp'o)	Ch'ŏlla-pukto	600,000
9. Sŏnch'a (Sŏnsŏn)	Pyŏngan-pukto	500,000
10. Sŏnbŏng (Ŭiju)	Hamgyŏng-namdo	300,000
11. Wŏnsan (Kŭmsŏng)	Hwanghae-do	300,000
12. Chŏnsŏn (Ch'ŏnsŏn)	Ch'ungch'ŏng-namdo	300,000
13. Sŏnsŏng (Sŏnch'ŏn)	Pyŏngan-pukto	300,000
14. Ch'angsŏng (Ch'ŏnsŏn)	Ch'ungch'ŏng-namdo	300,000
15. Sŏnbŏm (Kŭmsŏng)	Kangwŏn-do	300,000
		$13,000,000

COAL	Mine	Tons	Value
1935	201	2,201,650	$4,400,000
1940	527	5,800,000*	$5,000,000*
			*Estimated

Major Mines

1. Sunch'ŏn (Sunch'ŏn)	Pyŏngan-namdo	anthracite
2. P'yŏngyang (Hŭlsŏ)	Pyŏngan-namdo	anthracite
3. Sŏk (Ansŏk)	Hwangp'ung-pukto	bituminous
4. Kŭmsŏng (Kŭmsŏng)	Hamgyŏng-pukto	bituminous
5. Yŏngan (Ŭiju)	Hamgyŏng-namdo	bituminous
6. Sŏnbŏ (Sŏnbŏ)	Hwanghae-do	anthracite
7. Yŏngwŏl (Yŏngwŏl)	Kangwŏn-do	anthracite
8. Sanch'ŏk (Samch'ŏk)	Kangwŏn-do	anthracite
9. Mun'gyŏng (Mun'gyŏng)	Ch'ungch'ŏng-pukto	anthracite
10. Anju (Anju)	Pyŏngan-namdo	bituminous
11. Tŏkch'ŏn (Tŏkwŏn)	Pyŏngan-namdo	anthracite
12. Kyŏngwŏn (Kŭmsŏng)	Hamgyŏng-pukto	bituminous

IRON

	Mines	Tons	Value
1935	144	Ex. 330,305	$1,200,000
1940	240	Est. 4,000,000	10,000,000

Leading Mines:

1. Musan (Musan)	Hamgyŏng-pukto
2. Anju (Ŭiju)	Hamgyŏng-namdo
3. Chaeryŏng (Sŏnsŏl)	Hwanghae-do
4. Hamhŭng (Kŭmsŏng)	Hwanghae-do
5. Kŭmch'ŏn (Kŭmsŏng)	Hwanghae-do
6. Ŭlsan (Sunan)	Hwanghae-do

ALUMINA ORES

1. Ongnyusan (Hyŏnsŏnsan) [near Hamhŭng]	Ch'ŏlla-namdo
2. Kanch'i (Kanch'i) [near Hamhŭng]	Ch'ŏlla-namdo
3. Hamsŏn (Sŏnsŏn)	Ch'ŏlla-namdo
4. P'yŏngyang (Hŭlsŏ)	P'yŏngan-namdo
5. Ch'angsan-ni (Chasan-ni)	Ch'ŏlla-namdo

MAGNESITE

1. Yŏngsu (Hŭngnam)	Hamgyŏng-pukto
2. Sŏnch'ŏnbong (Sŏnch'ŏn-ni)	Hamgyŏng-namdo

MICA

1. Kŭmhŭi (Kŭmsŏng)	Hamgyŏng-pukto

COPPER

1. Tŭpsŏn (Tŭpsŏn)	Hamgyŏng-namdo
2. Sŏnbŏng (Kŭmsŏng)	P'yŏngan-pukto
3. Tŏkch'ŏn (Tŏkwŏn)	Hwanghae-do
4. Ŭnsan (Ŭnsan)	Kyŏngsang-namdo

ZINC

1. Kŭmsŏng (Kŭmsŏng)	Hamgyŏng-namdo
2. Ongjin (Ongjin)	Hwanghae-do

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